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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/415,795

10/08/1999

PENGBO ZHOU

HMV-043.01

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05/18/2006

FOLEY HOAG, LLP

PATENT GROUP, WORLD TRADE CENTER WEST

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BOSTON, MA 02210-2600

EXAMINER

SLOBODYANSKY, ELIZABETH

ART UNIT

PAPER NUMBER

1652

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/415,795

Applicant(s)

ZHOU ET AL.

Examiner

Elizabeth Slobodyansky, PhD

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1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36,39,46,48,49,61,63,65 and 71-80 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36,39,46,48,49,61,63,65 and 71-80 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 30, 2006 has been entered.

The amendment filed January 30, 2006 (previously filed September 28, 2005) amending the specification to insert references to SEQ ID NO: 48 and SEQ ID NO:49, canceling claims 47, 62 and 64, amending claims 36, 49, 61 and 65 and adding claims 71-80 has been entered.

The Sequence Listing and the computer readable form thereof, both filed January 30, 2006, have been entered.

Claims 36, 39, 46, 48, 49, 61, 63, 65 and 71-80 are pending.

### ***Specification***

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). It appears that SEQ ID NO: 3 and SEQ ID NO:4 are identical to SEQ ID

NO:48 and SEQ ID NO:49, respectively. Each sequence should be assigned only one sequence identifier.

The disclosure is objected to because, as amended 1/30/06, it recites "The F-box of this protein corresponds to amino acid 148-192 (SEQ ID NO: 49. which is encoded by SEQ ID NO: 48)" (page 30). SEQ ID NO:48 is 2151 nucleotides and SEQ ID NO:49 is 569 amino acids.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 36, 39, 46, 48, 49, 61, 63, 65, 71, 72, 74 and 77-80 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 36, with dependent claims 39, 46, 48, 49, 61, 63 and 78, recites "F-box comprising an amino acid sequence that is encoded by a nucleotide sequence that is at least about 95% identical to SEQ ID NO:49". Claims 71-72 depend from claim 36 and recite "a nucleotide sequence that is at least about 98% [or 99%] identical to SEQ ID

NO:49". Claim 74 depends from claim 36 and recites "wherein the amino acid sequence is encoded by a nucleotide sequence that is at least about 95% identical to SEQ ID NO:3".

While the specification provides support for a nucleotide sequence that is at least (but not "about at least") 95% identical to "an nucleic acid sequence of a sequence shown in one of the sequence listings", i.e. SEQ ID NO:3, for example, (page 20, last paragraph, emphasis added), the examiner is unable to locate adequate support in the specification for at least 95% identity to the amino acid sequence of SEQ ID NO:49 that was added by the amendment on 1/30/06 or to a fragment of any specific amino acid sequence, such as SEQ ID NO:4, for example. Furthermore, there is no support for a nucleotide sequence that is at least 95% identical to a nucleotide sequence encoding a specific amino acid sequence of SEQ ID NO:4 or a fragment thereof other than a nucleotide sequence of SEQ ID NO:3. Thus there is no indication that above sequences were within the scope of the invention as conceived by Applicants at the time the application was filed.

Accordingly, Applicants are required to cancel the new matter in the response to this Office Action.

Claims 65, 77, 79 and 80 recite "an amino acid sequence that is encoded by a nucleic acid that hybridizes under stringent hybridization conditions to including a wash step at 65° C to a nucleic acid consisting of SEQ ID NO:48 [or SEQ ID NO:3]".

Therefore, the genus of amino acid sequences encompasses proteins of diverse function

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characterized by structure only. The claims do not require for a nucleotide sequence to encode an F-box protein consisting of 148-192 of SEQ ID NO:4. A substantial portion of the genus of nucleotide sequences would not encode an F-box. The specification fails to provide the correlation between structure and function common to all members of the genus.

Therefore, the specification is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art cannot reasonably conclude that the applicant had possession of the claimed invention at the time the instant application was filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 36, 39, 46, 48, 49, 61, 63, 65 and 71-80 are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 recites "at least about 95% identical", claim 71 recites "at least about 98% identical", claim 72 recites "at least about 99% identical", etc. It is not defined in the specification as to how "about" affects the metes and bounds of the claims. for example, how different are the metes and bounds of "at least about 98%" and "at least about 99%". Amending the claims to recite "at least 95%, 98%, 99%" would obviate this part of the rejection.

Claim 65 recites "a nucleic acid consisting of SEQ ID NO:48". It is only one nucleic acid that consists of SEQ ID NO:48. Claim 65 recites the limitation "the peptide" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claims 65, 77, 79 and 80 recite "a wash step at 65°C". Only temperature is insufficient to define the metes and bounds of the claims. Amending the claims to recite "a wash step at 0.2 X SSC at 65°C" would obviate this part of the rejection (specification at page 29).

Claims 71-73 recite "nucleotide sequence ... identical to SEQ ID NO:49", wherein SEQID NO:49 is an amino acid sequence.

Claims 73 and 76 are confusing as reciting "encoded by a nucleotide sequence that is identical to SEQ ID NO:49" or "SEQ ID NO:3", respectively. Amending the claims to recite reciting "encoded by the nucleotide sequence of SEQ ID NO:49" or "SEQ ID NO:3", respectively, would obviate this part of the rejection.

### ***Response to Arguments***

Applicant's arguments filed January 30, 2006 have been fully considered but they are not persuasive.

With regard to the Sequence Listing Applicants state that "SEQ ID NO:49 corresponds to amino acids 148-192 of SEQ ID NO:4. SEQ ID NO:48 consists of the nucleotide sequence of SEQ ID NO:3 that encodes SEQ ID NO:49, i.e. nucleotides 511-645 of SEQ ID NO:3 (Remarks, page 6). This is incorrect, as explained above.

With regard to the support for the "95% identical to SEQ ID NO:49" Applicants argue that "Applicants respectfully submit that the very same paragraph from the specification that was cited in the Office Action of 7/14/04 and quoted above provides support the claim language. As set forth above, the Examiner indicated that "the specification provides support for a nucleotide sequence that is at least 90% or 95% identical to a 'nucleic acid sequence **of a** sequence shown in one of the sequence listings' (page 20, last paragraph, emphasis added)" (double underline and bold provided as emphasis by Applicants). Thus, this sentence provides literal support for nucleotide sequences that are least 90% or 95% identical to a portion of a sequence shown in the sequence listing, e.g., SEQ ID NO: 3" (page 8). This is not persuasive because even if the specification would provide support for "a portion" of sequence, it does not provide support for a specific portion such as consisting of residues 148-192 of SEQ ID NO:4, for example. Applicants further argue that "Regarding the amendment to claim 36, the Advisory Action indicated that "as amended, claim 36 does not limit the entire F-box protein by structure. Applicants respectfully submit that claim 36 as amended and reciting "an F-box comprising an amino acid sequence that is encoded by a nucleotide sequence that is at least about 95% identical to SEQ ID NO: 49," structurally limits the entire F-box protein by structure due to the homology requirement "(page 8). This is not agreed with because SEQ ID NO:49 has 569 residues and the sequence that 95% identical thereto may not necessarily exhibit the requisite an F-box properties.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky, PhD whose telephone number is 571-272-0941. The examiner can normally be reached on M-F 10:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, PhD can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Elizabeth Slobodyansky, PhD  
Primary Examiner  
Art Unit 1652

May 11, 2006